9010
Excavator

Service Manual

7-44660

CASE CONSTRUCTION

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TORQUE SPECIFICATIONS - DECIMAL HARDWARE

Use the torques in this chart when special torques are not given. These torques apply to fasteners with both UNC and UNF threads as received from suppliers, dry, or when lubricated with engine oil. Not applicable if special graphites, molydisulfide greases, or other extreme pressure lubricants are used.

Grade 5 Bolts, Nuts, and Studs



Size	Pound-Feet	Newton metres
1/4 in	9-11	12-15
5/16 in	17-21	23-28
3/8 in	35-42	48-57
7/16 in	54-64	73-87
1/2 in	80-96	109-130
9/16 in	110-132	149-179
5/8 in	150-180	203-244
3/4 in	270-324	366-439
7/8 in	400-480	542-651
1.0 in	580-696	787-944
1-1/8 in	800-880	1085-1193
1-1/4 in	1120-1240	1519-1681
1-3/8 in	1460-1680	1980-2278
1-1/2 in	1940-2200	2631-2983

Grade 8 Bolts, Nuts, and Studs



Size	Pound-Feet	Newton metres
1/4 in	12-15	16-20
5/16 in	24-29	33-39
3/8 in	45-54	61-73
7/16 in	70-84	95-114
1/2 in	110-132	149-179
9/16 in	160-192	217-260
5/8 in	220-264	298-358
3/4 in	380-456	515-618
7/8 in	600-720	814-976
1.0 in	900-1080	1220-1465
1-1/8 in	1280-1440	1736-1953
1-1/4 in	1820-2000	2468-2712
1-3/8 in	2380-2720	3227-3688
1-1/2 in	3160-3560	4285-4827

NOTE: *Use thick nuts with Grade 8 bolts.*

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NOTE: The J I Case Company reserves the right to make improvements in design or changes in specifications at any time without incurring any obligation to install them on units previously sold.

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48 WASHER MOTOR

Check Points	Reading	Possible Cause of Bad Reading
NOTE: *Disconnect the connector from the washer motor. Put the key switch in the ON position.*		
Terminal for blue wire to ground.	24 volts	Bad circuit between the washer motor and the wiper switch (58). Also check the wiper switch (58).
NOTE: *Have another person push in and hold the wiper switch.*		
Terminal for blue wire to terminal for blue/black wire.	24 volts	Bad circuit between the washer motor and the wiper switch (58). Also check the wiper switch (58).
NOTE: *If the readings are good, replace the washer motor.*		

49 WIPER MOTOR

50 CONTROL SWITCH SOLENOID

Check Points	Reading	Possible Cause of Bad Reading
NOTE: *Put the key switch in the ON position. Make sure the left console arm is in the operating position. Put the control rocker switch in the UNLOCKED position.*		
Terminal for violet wire to ground.	24 volts	Bad circuit between the control switch solenoid and the control limit switch (42). Also check the control limit switch (42).
Terminal for violet wire to terminal for ground wire.	24 volts	Bad ground circuit.
NOTE: *If the readings are good, replace the control switch solenoid.*		

51 ATTACHMENT CUSHION CONTROL SOLENOID

Check Points	Reading	Possible Cause of Bad Reading
NOTE: *Put the key switch in the ON position. Put the attachment cushion control switch in the NORMAL position.*		
Terminal for gray/blue wire to ground.	24 volts	Bad circuit between the attachment cushion control solenoid and the cushion relay (46). Also check the cushion relay (46).
Terminal for gray/blue wire to terminal for ground wire.	24 volts	Bad ground circuit.
NOTE: *If the readings are good, replace the attachment cushion control solenoid.*		

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Problem in the RH Travel Circuit

See page 18 and check the crossover relief valves for the RH travel circuit. Are the pressures correct?

NO → See page 18 and adjust the crossover relief valves.

YES ↓

Does the problem occur at both travel speeds?

NO → Check the two speed travel valve.

YES ↓

Check the parking brake in the RH travel motor. Does the parking brake release when the RH travel control is in a power position?

NO → Repair or replace the RH travel motor.

YES ↓

Check the RH travel motor. Is there excessive leakage? (See page 3 for acceptable leakage rate.)

NO → Check the bucket side of the main control valve. Repair or replace as necessary.

YES ↓

Repair or replace the RH travel motor.

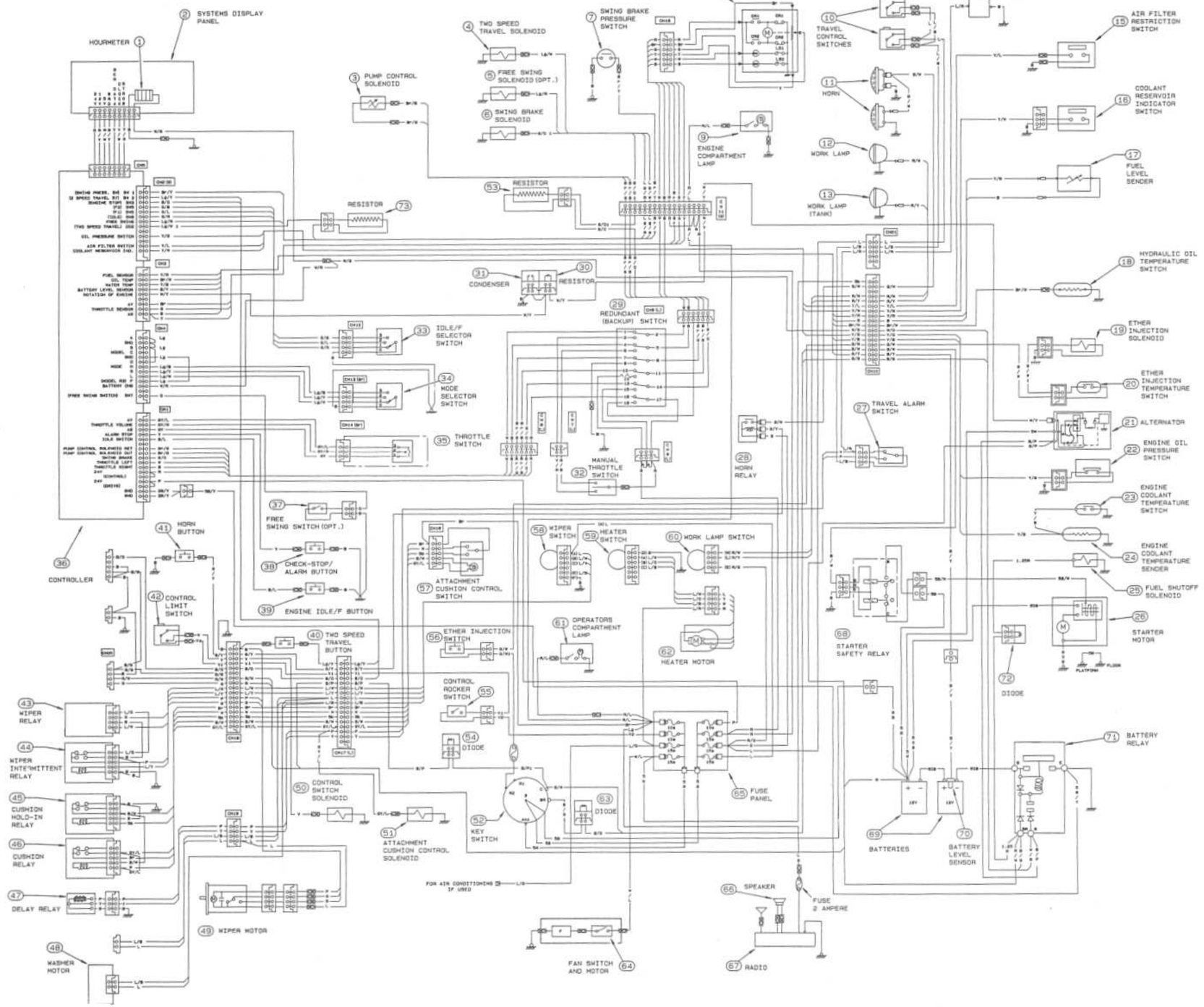
NOTE: *If the problem is that the machine will not move in a straight line when another circuit is working, the probable cause is a problem in the travel priority circuit. Repair or replace the main control valve as necessary.*

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SPECIFICATIONS

Hydraulic reservoir capacity	21.9 U.S. gallons (83 liters)
Weight of the hydraulic swivel	46 pounds (21 kg)
Special torques	
Allen head screws that hold the cover to the housing	23 to 28 pound-feet (31 to 38 Nm)
Allen head screws that hold the thrust plate to the shaft	9 to 12 pound-feet (12 to 16 Nm)

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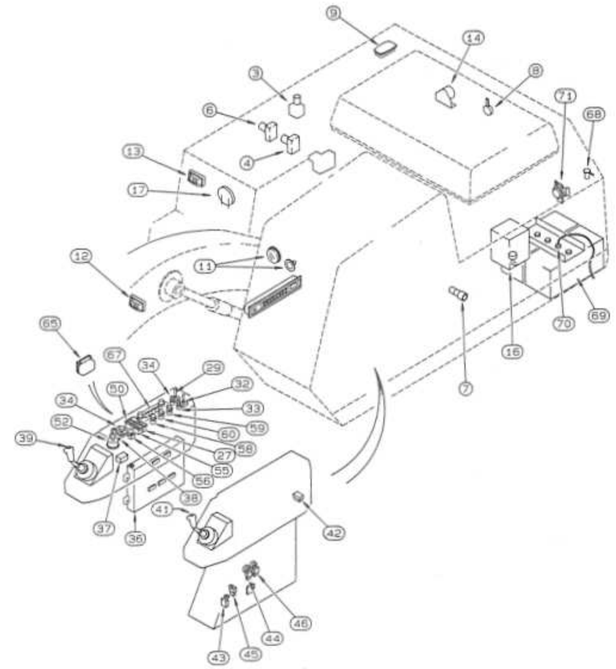


TABLE OF COLOR SYMBOLS			
SYMBOL	COLOR	SYMBOL	COLOR
B	BLACK	R	RED
W	WHITE	Y	YELLOW
Br	BROWN	Lg	LIGHT GREEN
P	PINK	Sb	SKY BLUE
V	VIOLET		
G	GREEN	L	BLUE
O	ORANGE	Gy	GRAY

NOTES:

1. HARNESS, BODY GROUND, CABLE GROUND, CONNECTED, NOT CONNECTED

2. CONNECTOR (MALE) TERMINAL (FEMALE); CONNECTOR (FEMALE) TERMINAL (MALE)

3. CH12 (L) — CONNECTOR NUMBER; COLOR OF CONNECTOR (IF NOT INDICATED, COLOR IS WHITE.)

(52) KEY SWITCH

POS.	CONNECTION B	R1	R2	Acc	Br	C
3						
OFF	O					
1	O				O	
2		O		O	O	

(59) HEATER SWITCH

POS.	CONNECTION D	E	A	B	C
OFF	O				
1 (L)	O		O	O	
2 (M)		O			O
3 (H)	O				O

(58) WIPER SWITCH

POS.	CONNECTION A	B	C	D	E	F
OFF			O			
INT	O	O				
CONT	O			O		
WASH					O	O

(60) WORK LAMP SWITCH

POS.	CONNECTION E	L	M
OFF	O		
I	O	O	
II	O		O

9010 HYDRAULIC AND ELECTRICAL SCHEMATIC

Additional copies of this hydraulic and electrical schematic can be ordered through Technical Publications Distribution System. The part number is 7-45710.

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